4/3,K/1      (Item 1 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

01797873  04-48864
**The human-computer interface and information literacy: Some basics and beyond**
Church, Gary M
Information Technology & Libraries  v18n1  PP: 3-21  Mar 1999
ISSN: 0730-9295  JRNL CODE: JLA
WORD COUNT: 13983

...TEXT: be decoded and the message understood.

Although it will not be elaborated upon here, the Shannon -Weaver model is also associated with a mathematical theory of communication based on the statistical nature of language. In this theory, the thermodynamic concept of entropy is closely related to the concept of information. However, in this sense, the term information...

... greeting telegrams" (Weaver 1949, 12). This freedom of choice relates information in this sense to entropy . It is also important to point out that, in this theory, and because of Shannon 's emphasis on the technical aspects of communication, information has nothing to do with meaning... research involves evaluating the ways in which computer systems affect not only individual users and groups of users within an organization, but also the entire organization from such standpoints as

4/3,K/2      (Item 2 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

01628942  02-79931
**Organizational structures to match the new information-rich environments: Lessons from the study of chaos**
Neumann, Francis X Jr
Public Productivity & Management Review  v21n1  PP: 86-100  Sep 1997
ISSN: 1044-8039  JRNL CODE: PBP
WORD COUNT: 7967

...TEXT: present-day managers. Here the disturbed-reactive condition adds the dimension of competition between the groups that populate the field. Now the environment may be altered by the decisions of others...that an open system is adaptive precisely because it is able to exchange energy and entropy in a circular process with its external environment. In the case of a social system...

... information flows to and from its own environment perform identical roles as do energy and entropy in the natural system. Jantsch (1980) spoke of "pragmatic information," or effective information, which is...

... and determinism) (pp. 51-52). He also related this aspect to the communication theories of Shannon and Weaver and reiterated their assertion that the maximum information is transmitted when novelty and...

4/3,K/3      (Item 3 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

...TEXT: top-down approach to making CRAs. However, experience did not
improve judgment accuracy since both groups were equally conservative in
relation to the firm's suggested solution. This judgment response result...
process is a somewhat structured task, the recent IC conceptual training
provided auditors in both groups with the conceptual knowledge the firm
believes will be sufficient to meet the firm's...32 times. The audit
seniors were from Grant Thornton. The experiment was given to both groups
at the end of approximately 16 hours of formal instruction by the firm's
audit...

... continuing education sessions, but the instruction material and the
instructor were the same for both groups .
Experimental Case

The case was based on the revenue cycle of a merchandising client of...
accurately predicting the auditors' CRAs for both the training and test
sets for both auditor groups . These accuracy results are reported and
explained below in the validation section.

The data observations...nodes that represent cue features. Before using the
models to test the difference between the groups for attention to cue
features, the models were validated to provide evidence that each model...

... possible. T-tests were used to test for differences in central tendency
between the two groups for number of cues chosen (H2), judgment time (H3)
and judgment response accuracy (H4). Two groups , however can have the
same mean but have different variations in the sample distributions. Levene
...

... variances was used to test for differences in variation about the mean
between the two groups for the judgment response. Levene's test serves as
a proxy for consensus within each...

... approaches to selecting cues. Entropy can also be interpreted as an
assessment of the two groups ' relative levels of information content
exhibited by the cue sets used by auditors in each...shows that the average
number of revenue cycle environment variables was the same for both groups
 (3.9 to 3.9, t-test p = .42), but that, on average, the experienced...

...moderate. The t-test showed that judgment accuracy was not statistically
different between the two groups (p = .71). Levene's test showed that
interauditor consensus within ... controls, programmed controls and
segregation of duties are as follows:

Although 89 percent of both groups planned to rely on segregation of
duties, more inexperienced seniors planned to rely on any...

...This finding is consistent with findings of Biggs et al. (1987).

The results that both groups planned an audit that would potentially
"under rely" on internal controls may support the belief...the task more

seriously, thus mitigating motivational differences included in the analysis comparing the two groups . Theoretical reasoning based on prior research (i.e., CRA is a somewhat structured task that both groups have at least the minimum ability and conceptual knowledge to meet a firms' minimal performance...
... used in an attempt to control for ability and conceptual knowledge differences between the experimental groups . To the extent the goal of controlling for ability and conceptual knowledge was not achieved...defined as the ratio of the standard deviation to the mean expressed as a percentage.

Entropy is viewed as a quantitative measure of the information content of an information system ( Shannon 1948). In physics, entropy can be interpreted as a measure of the order of a system; high entropy values correspond to chaos; low entropy values to order (Toda et al. 1983). Entropy is computed as follows:

Formula omitted

In this study, when entropy is low, the weights...

... in this study could be chosen as relevant in other cases or by other auditor groups . The decision was also made to keep the neural network modeled after the control variables...

...comparison of the weight distributions of networks with ten middle nodes for each of the groups was performed. The results were consistent with the networks with five middle nodes. Entropy for...


   **4/3,K/4      (Item 4 from file: 15)**
DIALOG(R)File  15:ABI/Inform(R)

00929954  95-79346
 **Changing patterns of power, chaotic dynamics and the emergence of a post-modern organizational paradigm**
Jenner, Richard A
Journal of Organizational Change Management  v7n3  PP: 8-21  1994
ISSN: 0953-4814  JRNL CODE: ORC
WORD COUNT: 5956

...TEXT: potential responses. In other words, its channels of communication must exhibit at least as much entropy , or variety, as the entropy of the disturbances. Shannon showed that each message sent through a "restricted" channel, in which the potential variety permitted...regards an organization as a highly interconnected system of what Drucker (1990) calls "modules", or groups and teams of workers, that possess substantial power (Schonberger, 1990). These teams are connected by...the creative efforts of subordinates, to provide encouragement, necessary resources and co-ordination with other groups throughout the organization.

CONCLUSION: CONSUMER POWER AND ORGANIZATIONAL STRUCTURE

It can be seen that a...


   **4/3,K/5      (Item 1 from file: 148)**
DIALOG(R)File 148:Gale Group Trade & Industry DB

09348367     SUPPLIER NUMBER: 19178631     (USE FORMAT 7 OR 9 FOR FULL TEXT)
**A nonlinear extension of principal component analysis for clustering and spatial differentiation.**
Sudjianto, Agus; Wasserman, Gary S.
IIE Transactions, v28, n12, p1023(6)
Dec, 1996
ISSN: 0740-817X     LANGUAGE: English     RECORD TYPE: Fulltext; Abstract
WORD COUNT:   3616     LINE COUNT:   00300

...     is to identify a single principal component that can be used to separate the two  clusters . The eigenvector associated with the largest eigenvalue is labeled. It is evident that the projection of the data along this axis will not produce an adequate separation of the two  clusters . Alternatively, an axis is shown that was generated with a nonlinear extension of PCA. In...maximum separation between the two populations, as evidenced by the appearance of the two data  clusters  at extreme positions of the principal axis. The fact that these projections are non-Gaussian...

...three species are also shown. In Fig. 2a, it is evident that only two distinct  clusters  were revealed when using linear PCA; however, all three  groups  are revealed when the nonlinear extension was tested (ILLUSTRATION FOR FIGURE 2B OMITTED).
     A dataset...

...with (7) are summarized in Fig. 3, where it is visually evident that the three  clusters  are well separated. Jones and Sibson (1987, Fig. 7a) report that the separation of the three  clusters  is very vague when using just the first two principal components of linear PCA; however, with the use of an EPP projection index, an adequate separation of the  three  groups  is obtained in just two dimensions. The nonlinear extension of PCA, not surprisingly, exhibits a...

...Posse, 1991). This includes the use of criteria based upon a standardized Fisher or negative  Shannon  entropy  by Huber (1985), and the order-2  entropy  by Jones and Sibson (1987). However, in that these criterion involve an estimation of a...

...monoxide. Three different engine calibrations were used during the study, and therefore up to three  clusters  should be identifiable. At most two data  clusters  were identified by using the four-dimensional matrix plot. One-dimensional and two-dimensional projections...

...linear PCA and the nonlinear extension; they are summarized in Fig. 5. The actual data  groups  are known and are overlaid upon the projections. It is seen that at most two data  clusters  were identifiable by using either of the one-dimensional projections or the two-dimensional projections with linear PCA. However, three well-defined data  clusters  do appear when the nonlinear extension is used to generate two-dimensional projections. These results...


     **4/3,K/6      (Item 2 from file: 148)**
DIALOG(R)File 148:Gale Group Trade & Industry DB
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07568610     SUPPLIER NUMBER: 16308896     (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Putting the components before the system. (building a hybrid trading system)(includes related article)**
Ruggiero, Murray A., Jr.

Futures (Cedar Falls, Iowa), v23, n11, p42(3)
Oct, 1994
ISSN: 0746-2468　　　LANGUAGE: ENGLISH　　　RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT:　2062　　LINE COUNT:　00160


...　　different and may complement each other.
　　C4.5 and ID3
　　In the late 1940s, Claude　Shannon　developed a concept called
"Information Theory" which allows us to measure the information content of
data. This can be done using the amount of confusion or " entropy " in the
data.
　　C4.5 is a descendent of ID3. Both of these algorithms produce...

...sets or "roughness."
　　Data bins are created by specifying data precision or cutting the data
 groups　at predetermined points. The size and location of data bins
incorporates additional domain knowledge about...


　4/3,K/7　　　(Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
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06475813　　SUPPLIER NUMBER: 13924713　　(USE FORMAT 7 OR 9 FOR FULL TEXT)
**Lossless compression: how it works. (Lab Notes) (Tutorial)**
Simon, Barry
PC Magazine, v12, n12, p305(5)
June 29, 1993
DOCUMENT TYPE: Tutorial　　　ISSN: 0888-8507　　　LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT:　4804　　LINE COUNT:　00356


...　　sub]]2p(1) bits, character 2 requires -log[[sub]]2p(2) bits, and so
on. Shannon　says you cannot do any better than this. Drawing an analogy
with a similar-looking quantity introduced by nineteenth century physicists
studying statistical mechanics,　Shannon　called the quantity N the
entropy .
　　As a simple example, suppose all the p(j)'s are equal. If there are...
Fano-Shannon uses the opposite strategy: At each stage, it breaks the
characters into two　groups　with roughly equal probabilities and builds
the tree from the root toward the leaves. This...


　4/3,K/8　　　(Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01669993　　SUPPLIER NUMBER: 15048609　　(USE FORMAT 7 OR 9 FOR FULL TEXT)
**Where compression began. (What's the Code?) (Tutorial)**
Stafford, David
Computer Shopper, v14, n4, p598(3)
April, 1994
DOCUMENT TYPE: Tutorial　　　ISSN: 0886-0556　　　LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT:　1840　　LINE COUNT:　00133

ABSTRACT:　The mathematician and information scientist Claude　Shannon
originated the theory of data compression in his revolutionary 1948 paper
'The Mathematical Theory of Communication.'　Shannon　reasoned that the
information content or ' entropy ' of any message was equal to its

probability of occurrence. Messages that occur most frequently are most redundant, and hence have the highest entropy . They can be compressed the most by employing the shortest abbreviation to substitute for them. Less ubiquitous messages require longer representations to indicate them in an optimal coding scheme.  Shannon 's insight led him to develop a coding method that MIT researcher R.F. Fano also discovered independently, the Shannon -Fano coding. It assigns codes to messages from the most entropic ones on down to...

The late mathematician and computer scientist, Claude  Shannon , justly deserves the title of Father of Information Theory. It is difficult to find any...

...his early ideas was that a message contained a certain level of information content, its  entropy , which could be calculated by its probability of occurrence. The important thing to understand is that this entropy  was not necessarily the size of the original message, since most messages contain a high...

...of three. Does this mean, then, that the entropy is 2.5 bits per character?

Shannon  deals with this question via a clever little parlor game. Show a person a sequence...

...guess the next letter. The fewer the number of guesses it takes, the lower the  entropy . His results revealed that it requires, on average, only two guesses per character. That makes the  entropy  equal to just one bit per character. Two and a half times better than the...

...now known as Shannon-Fano coding. The idea is to divide the symbols into two  groups  so that the probabilities of the symbols of each group add up to about the...

...value.

Call the left group 0 and the right group 1. Continue subdividing and naming  groups  until each group contains only one symbol. In our example, we would first divide ABCD...
?